=> d his

(FILE 'HOME' ENTERED AT 10:06:37 ON 16 DEC 2008)
FILE 'CA' ENTERED AT 10:06:47 ON 16 DEC 2008
L1 1163 S POLYPHENYLENEETHYN? OR PHENYLENEETHYN? OR POLYPHENYLENE ETHYN? OR PHENYLENE(1A)ETHYN? OR POLYETHYN? PHENYLENE
L2 494 S L1 AND (FLUORESC? OR LUMINESC? OR PHOTOLUMINESC? OR ELECTROLUMINESC?)
L3 10 S L1 AND CROWN?
L4 76 S L2 AND (COMPLEX? OR CHELAT? OR PODAND OR CALIX?)
L5 83 S L3-4
L6 36 S L5 AND PY<2005
FILE 'BIOSIS' ENTERED AT 10:09:26 ON 16 DEC 2008
L7 0 S L6
FILE 'MEDLINE' ENTERED AT 10:09:41 ON 16 DEC 2008
L8 9 S L6
FILE 'CA, MEDLINE' ENTERED AT 10:10:07 ON 16 DEC 2008
L9 37 DUP REM L6 L8 (8 DUPLICATES REMOVED)

=> d bib,ab l9 1-37

L9 ANSWER 19 OF 37 CA COPYRIGHT 2008 ACS on STN
AN 137:338473 CA
TI Synthesis and properties of **calix**[4]arene-containing poly(**phenyleneethynylene**)s
AU Wosnick, Jordan H.; Swager, Timothy M.
CS Dept. of Chemistry, Massachusetts Inst. of Technology, Cambridge, MA, 02139, USA
SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (**2002**), 43(2), 1001-1002
AB The synthesis and properties of several **calix**[4]arene-substituted poly(**phenyleneethynylene**)s are reported. These polymers differ in their modes of attachment of the **calix**[4]arene group to the polymer backbone and in the mobility of the **calix**[4]arene skeleton. Polymers contg. a modified **crown** ether linkage connecting the **calix**[4]arene lower rim to the polymer main chain were extremely prone to gelation during polymn., a phenomenon not seen in polymers with **calix**[4]arenes attached via a single lower-rim tether or through an upper-rim linker group. The gelation effect is attributed to a zipper-like interdigitation of the rigidly held **calix**[4]arene groups on the growing polymer chains.

L9 ANSWER 20 OF 37 CA COPYRIGHT 2008 ACS on STN
AN 137:233185 CA
TI Directing energy transfer within conjugated polymer films
AU Rose, Aimee; Kim, Jinsang; McQuade, D. Tyler; Zhu, Zhennguo; Swager, Timothy M.
CS Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SO PMSE Preprints (**2002**), 87, 377
AB A striated multipolymer system was developed, which utilizes directional energy transfer to overcome the z-direction limitation in energy transfer within poly(p-**phenylene ethynylene**) conjugated polymers (CP). The polymers used are poly(p-**phenylene ethynylene**)s and copolymers of benzo-**crown** ethers and substituted benzodiacetylenes. The polymers have large spectral overlap between a donor emission and an acceptor absorption, ranging from the blue to the red, which encourages energy transfer from one polymer to a second, in LB multilayers. Two of the polymers were also designed to be non-aggregating and amphiphilic, thus allowing manipulation at the air-water interface. Energy can be preferentially transferred to the surface of a thin film by utilizing 8,16, 24, and 32 CP layers of sequentially decreasing band gap.

L9 ANSWER 29 OF 37 CA COPYRIGHT 2008 ACS on STN

AN 134:109803 CA
TI Ion-specific aggregation in conjugated polymers: highly sensitive and selective **fluorescent** ion chemosensors
AU Kim, Jinsang; McQuade, D. Tyler; McHugh, Sean K.; Swager, Timothy M.
CS Dep. Chem., Massachusetts Inst. Technology, Cambridge, MA, 02139, USA
SO Angewandte Chemie, International Edition (**2000**), 39(21), 3868-3872
AB A new transduction mechanism based on the aggregation of conjugated sensory polymers induced by K+ ions is reported; this new system displays enhanced sensitivity because of energy migration processes and has a high selectivity for K+ over Na+ ions. The poly(p-**phenylene ethynylene**)s were synthesized by the Sonogashira-Hagihara coupling reaction.

L9 ANSWER 31 OF 37 CA COPYRIGHT 2008 ACS on STN
AN 132:317347 CA
TI A poly(**phenyleneethynylene**) K+ chemosensor: detection via intermolecular aggregation
AU Kim, Jinsang; McQuade, D. Tyler; McHugh, Sean K.; Swager, Timothy M.
CS Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (**2000**), 41(1), 32-33
AB Poly(**phenyleneethynylene**)s with 15-**crown**-5 side groups on every other repeating unit selectively detects K' by forming intermol. bridges. The extent of the aggregations can be tuned by controlling the steric bulk of side groups.

L9 ANSWER 32 OF 37 CA COPYRIGHT 2008 ACS on STN
AN 131:299764 CA
TI High-Spin Polyphenoxyl Based on Poly(1,4-**phenyleneethynylene**)
AU Nishide, Hiroyuki; Maeda, Tadatoshi; Oyaizu, Kenichi; Tsuchida, Eishun
CS Department of Polymer Chemistry, Waseda University, Tokyo, 169-8555, Japan
SO Journal of Organic Chemistry (**1999**), 64(19), 7129-7134
AB Rodlike poly(1,4-**phenyleneethynylene**) 2-substituted with multiple pendant phenoxyls 1 was synthesized by polymg. 4-bromo-2-(3,5-di-tert-butyl-4-hydroxyphenyl)ethynylbenzene 10a using the catalyst of a palladium-triphenylphosphine **complex** and cuprous iodide and subsequent heterogeneous oxidn. The corresponding dimer 2 was also synthesized; X-ray anal. of its precursor 4 indicated a linear **phenyleneethynylene** backbone and twisted dihedral angles of 50 and 77° for the pendant phenol groups. ESR spectra suggested a delocalized spin distribution from the pendant phenoxyl to the backbone. The diphenoxyl 2 had a triplet (S = 2/2) ground state. The spin concn. of the polyphenoxyl 1 could not be increased beyond 0.7 spin/unit due to its low solvent soly.; 1 with a spin concn. of 0.62 had an av. S of 3/2.

L9 ANSWER 33 OF 37 CA COPYRIGHT 2008 ACS on STN
AN 131:177205 CA
TI Photophysics of metal-organic π-conjugated oligomers and polymers
AU Ley, K. D.; Walters, K. A.; Schanze, K. S.
CS Department of Chemistry, University of Florida, Gainesville, FL, 32611-7200, USA
SO Synthetic Metals (**1999**), 102(1-3), 1585-1586
AB A series of **phenylene-ethynylene** based π-conjugated oligomers that contain a 2,2'-bipyridine metal **chelating** unit has been synthesized by using Pd-mediated coupling chem. The photophysics of the free oligomers and **complexes** of the oligomers with the ReI(CO)3Cl metal chromophore is reported. These oligomers serve as excellent models for π-conjugated metal-org. polymers.

=> log y
STN INTERNATIONAL LOGOFF AT 10:10:48 ON 16 DEC 2008

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=> d his

     (FILE 'HOME' ENTERED AT 16:44:28 ON 15 DEC 2008)
     FILE 'REGISTRY' ENTERED AT 16:44:49 ON 15 DEC 2008
L1             STRUCTURE UPLOADED
L2               4 S L1
L3             118 S L1 FULL
L4               8 S L3 AND (POLYMER OR ETHYN?)
     FILE 'CA' ENTERED AT 16:48:33 ON 15 DEC 2008
L5              16 S L3
L6              66 S PSEUDO (1W)CROWN
L7              76 S L5-6

=>
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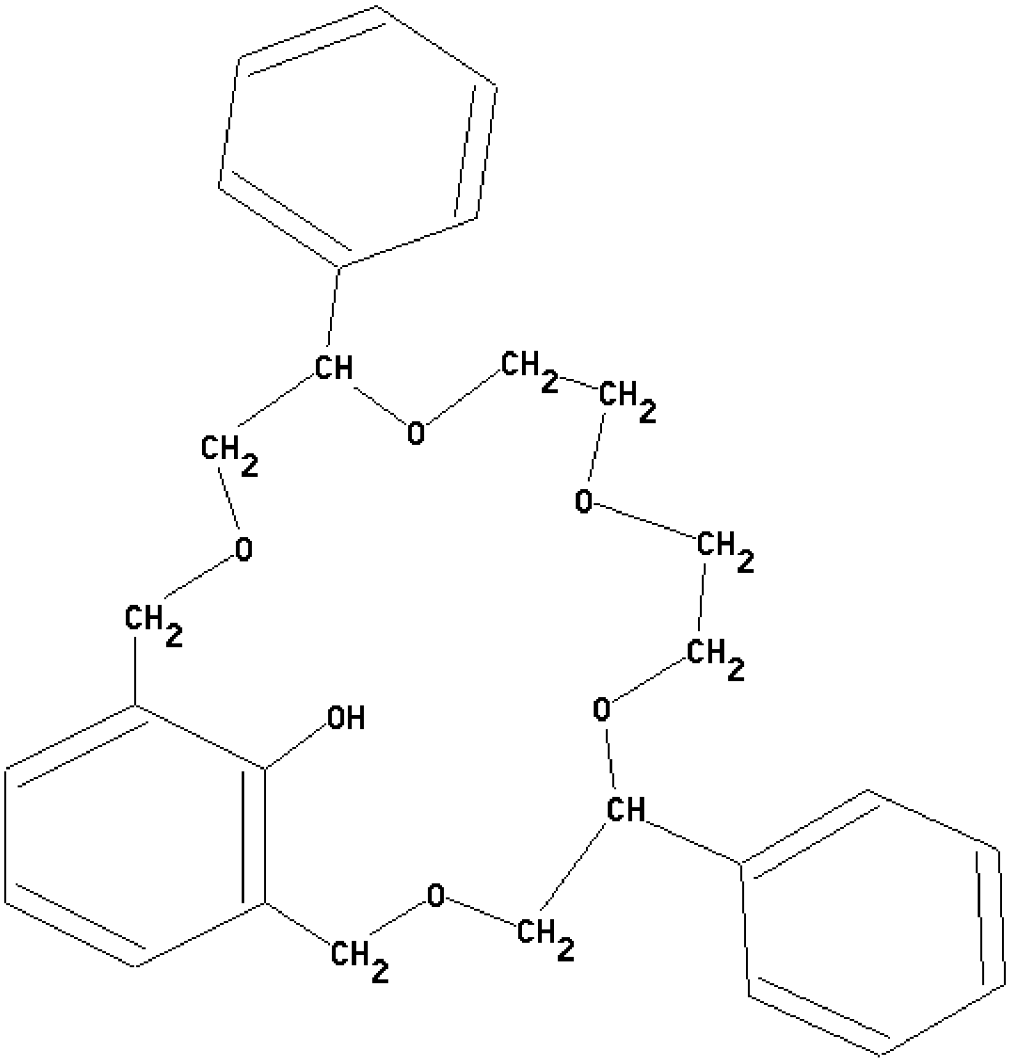
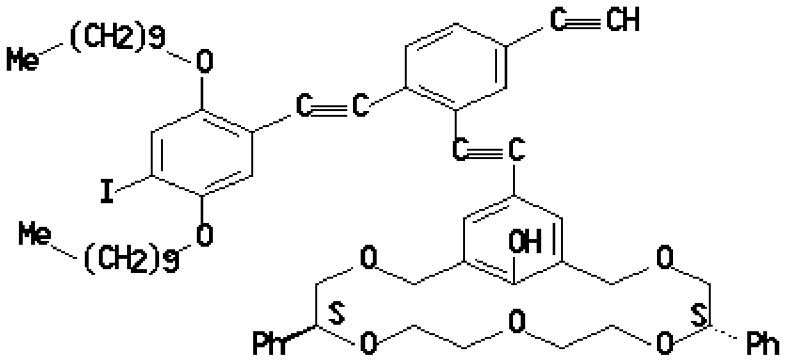


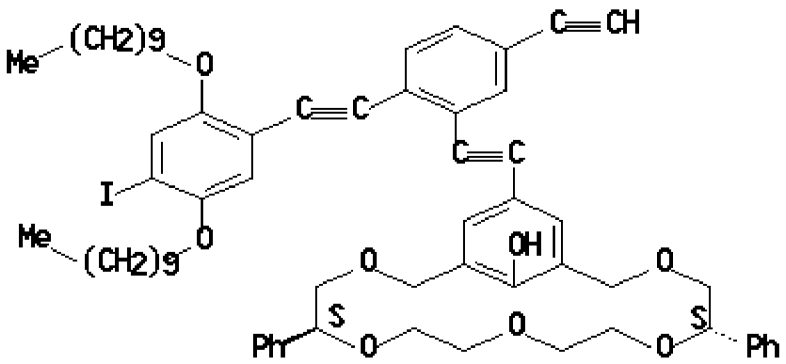

```
=> d l4 1-8

L4   ANSWER 1 OF 8  REGISTRY  COPYRIGHT 2008 ACS on STN
RN   864920-14-9  REGISTRY
```

CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[[2-[[2,5-bis(decyloxy)-4-iodophenyl]ethynyl]-5-ethynylphenyl]ethynyl]-5,13-diphenyl-, (5S,13S)-, homopolymer (9CI) (CA INDEX NAME)
MF (C66 H79 I O8)x
Absolute stereochemistry.



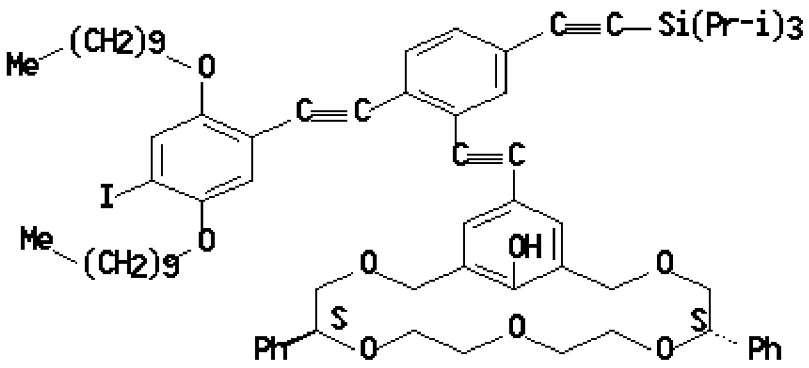
1 REFERENCES IN FILE CA (1907 TO DATE)

L4 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 864920-13-8 REGISTRY
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[2-[2-[2-[2,5-bis(decyloxy)-4-iodophenyl]ethynyl]-5-ethynylphenyl]ethynyl]-5,13-diphenyl-, (5S,13S)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[[2-[[2,5-bis(decyloxy)-4-iodophenyl]ethynyl]-5-ethynylphenyl]ethynyl]-5,13-diphenyl-, (5S,13S)- (9CI)
MF C66 H79 I O8
Absolute stereochemistry.



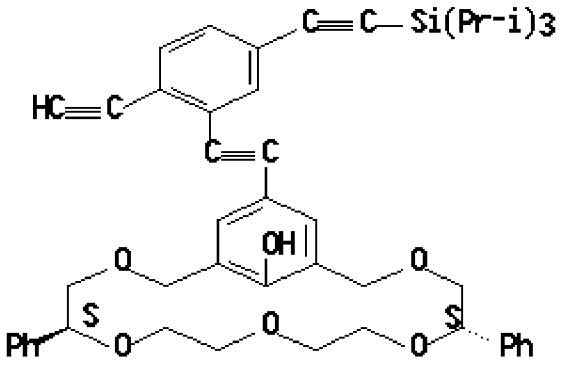
1 REFERENCES IN FILE CA (1907 TO DATE)

L4 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 864920-12-7 REGISTRY
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[2-[2-[2-[2,5-bis(decyloxy)-4-iodophenyl]ethynyl]-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-5,13-diphenyl-, (5S,13S)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[[2-[[2,5-bis(decyloxy)-4-iodophenyl]ethynyl]-5-[[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-5,13-diphenyl-, (5S,13S)- (9CI)
MF C75 H99 I O8 Si
Absolute stereochemistry.



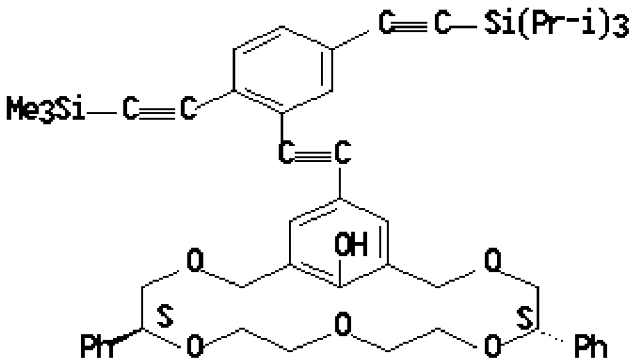
1 REFERENCES IN FILE CA (1907 TO DATE)

L4 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 864920-11-6 REGISTRY
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[2-[2-ethynyl-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-5,13-diphenyl-, (5S,13S)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-[[2-ethynyl-5-[[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-5,13-diphenyl-, (5S,13S)- (9CI)
MF C49 H56 O6 Si
Absolute stereochemistry.



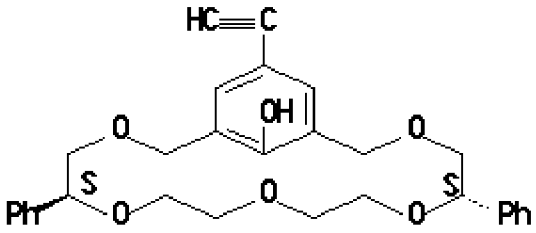
1 REFERENCES IN FILE CA (1907 TO DATE)

L4 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 864920-10-5 REGISTRY
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 5,13-diphenyl-19-[2-[2-[2-(trimethylsilyl)ethynyl]-5-[2-[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-, (5S,13S)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 5,13-diphenyl-19-[[2-[(trimethylsilyl)ethynyl]-5-[[tris(1-methylethyl)silyl]ethynyl]phenyl]ethynyl]-, (5S,13S)- (9CI)
MF C52 H64 O6 Si2
Absolute stereochemistry.



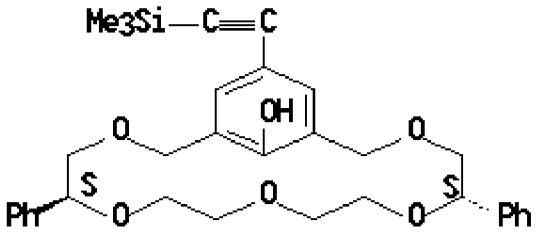
1 REFERENCES IN FILE CA (1907 TO DATE)

L4 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 864920-05-8 REGISTRY
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 19-ethynyl-5,13-diphenyl-, (5S,13S)- (CA INDEX NAME)
MF C30 H32 O6
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

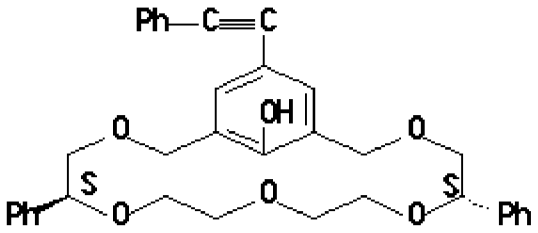
L4 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 864920-04-7 REGISTRY
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 5,13-diphenyl-19-[2-(trimethylsilyl)ethynyl]-, (5S,13S)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 5,13-diphenyl-19-[(trimethylsilyl)ethynyl]-, (5S,13S)- (9CI)
MF C33 H40 O6 Si
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)

L4 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2008 ACS on STN
RN 666837-00-9 REGISTRY

CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 5,13-diphenyl-19-(2-phenylethynyl)-, (5S,13S)- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3,6,9,12,15-Pentaoxabicyclo[15.3.1]heneicosa-1(21),17,19-trien-21-ol, 5,13-diphenyl-19-(phenylethynyl)-, (5S,13S)- (9CI)
MF C36 H36 O6
Absolute stereochemistry. Rotation (+).



1 REFERENCES IN FILE CA (1907 TO DATE)

=> d bib,ab l7 1-76

L7 ANSWER 22 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 143:338699 CA
TI Fluorescent molecular wire and its use in chiral sensor
IN Tobe, Yoshito; Hirose, Keiji
PA Japan Science and Technology Agency, Japan
SO Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005255778	A	20050922	JP 2004-67226	20040310
	JP 3950117	B2	20070725		
	WO 2005087835	A1	20050922	WO 2004-JP17675	20041122
	US 20070179272	A1	20070802	US 2006-591920	20060907
PRAI	JP 2004-67226	A	20040310		

AB The wire has a fluorescent polymer main chain to which an optically active substituent from a 3,4,5-substituted Ph group of the structure 3-(R10OCR4R5CR2R3O)-5-(R11OCR8R9CR6R6O)-4-R1OC6H2 (R1 = H, C1-10 alkyl; R2-R9 = H, C1-30 linear alkyl, C2-30 branched alkyl, C3-30 cycloalkyl, C6-30 aryl, C7-30 aralkyl; R3 and R4, R7 and R8 may be linked to form C2-60 alkylene; R10, R11 = H, C1-15 alkyl optionally contg. heteroatom; and R10 and R11 may be linked to form C2-30 alkylene) is conjugatively linked. The wire has high sensitivity and improved asym. recognition and is suitable for primary amine chiral sensor.

L7 ANSWER 24 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 143:221498 CA
TI Preparation and evaluation of a chiral stationary phase covalently bound with chiral pseudo-18-crown-6 ether having 1-phenyl-1,2-cyclohexanediol as a chiral unit
AU Hirose, Keiji; Yongzhu, Jin; Nakamura, Takashi; Nishioka, Ryota; Ueshige, Tetsuro; Tobe, Yoshito
CS Division of Frontier Materials Science, Graduate School of Engineering Science, Osaka University, Toyonaka, Osaka, 560-8531, Japan
SO Journal of Chromatography, A (2005), 1078(1-2), 35-41
AB A chiral stationary phase (CSP) was prepd. by chem. bonding a chiral pseudo-18-crown-6 type host having a 1-phenyl-1,2-cyclohexanediol unit to 3-aminopropyl silica gel. The chiral column was prepd. by the slurry-packing method in a

stainless steel HPLC column. Normal mobile phases can be used with this CSP in contrast to conventional dynamic coating type CSPs. Enantiomers of 20 out of 30 amino compds., including 20 amino acids, 2 amino acid Me esters, 6 amino alcs., and 2 lipophilic amines, were efficiently sepd. on columns with this CSP. It is noteworthy that 15 amino compds. out of 30 were sepd. with better sepn. factors and shorter retention times compared to the corresponding CSP having pseudo-18-crown-6 with 1-phenyl-1,2-ethanediol as a chiral unit. In view of the correlation between the enantiomer selectivities obsd. in chromatog. and those obtained in gas phase FABMS-EL methods and soln. phase titrns., chiral recognition in the host-guest interaction likely contributes to enantiomer sepn.

L7 ANSWER 27 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 141:431425 CA
TI Selective and Sensitive Fluorescent Sensors for Metal Ions Based on Manipulation of Side-Chain Compositions of Poly(p-phenyleneethynylene)s
AU Chen, Zhen; Xue, Cuihua; Shi, Wei; Luo, Fen-Tair; Green, Sarah; Chen, Jian; Liu, Haiying
CS Department of Chemistry, Michigan Technological University, Houghton, MI, 49931, USA
SO Analytical Chemistry (2004), 76(21), 6513-6518
AB The syntheses and metal-responsive properties of poly(p-phenyleenethynylene)s with grafted new pseudo-crown-ether groups are reported. These polymers exhibit high sensitivities to alkali ions because of their collective optical properties, which are very sensitive to ion-induced conformational changes. The quenching of polymer fluorescence caused by the conformational changes is proportional to the ion concn. The selectivity of the sensing materials toward Li+ ions is significantly enhanced by controlling the size of the binding site via manipulation of the polymer side-chain compns. The polymers are very stable for their six-month solid-state storage at room temp.

L7 ANSWER 30 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 140:235760 CA
TI Chiral sensor
IN Tobe, Yoshito; Hirose, Keiji
PA Japan Science and Technology Corporation, Japan
SO PCT Int. Appl., 29 pp.

PI	WO 2004018447	A1	20040304	WO 2003-JP7313	20030610
	US 20050227366	A1	20051013	US 2005-525012	20050217
	US 7358403	B2	20080415		
PRAI	JP 2002-239777	A	20020820		

AB This document discloses an optically active compd. having an unsatd. bond at the optically active combining site, wherein the unsatd. bond and a fluorescent substituent or a substituent capable of imparting fluorescence are united in a conjugated state; and a chiral sensor consisting of the compd. The chiral sensor can recognize specific chiral compds. highly sensitively and highly selectively.

L7 ANSWER 34 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 138:313549 CA
TI Preparation and evaluation of novel chiral stationary phases covalently bound with chiral pseudo-18-crown-6 ethers
AU Hirose, Keiji; Nakamura, Takashi; Nishioka, Ryota; Ueshige, Tetsuro; Tobe, Yoshito
CS Faculty of Engineering Science, Department of Chemistry, Osaka University, Toyonaka, Osaka, 560-8531, Japan
SO Tetrahedron Letters (2003), 44(8), 1549-1551
AB Novel chiral stationary phases consisting of silica gel covalently bound with chiral pseudo-18-crown-6 type hosts, which possess either an OH or OMe group as a binding functionality, were prepd. for enantiomer-sepn. of lipophilic amines.

L7 ANSWER 36 OF 76 CA COPYRIGHT 2008 ACS on STN

AN 138:169671 CA
TI Chiral recognition of secondary amines by using chiral crown ether and podand
AU Hirose, Keiji; Fujiwara, Akihito; Matsunaga, Kazuhisa; Aoki, Nobuaki; Tobe, Yoshito
CS Faculty of Engineering Science, Department of Chemistry, Osaka University, and CREST, Japan Science and Technology Corporation (JST), Toyonaka, Osaka, 560-8531, Japan
SO Tetrahedron Letters (2002), 43(47), 8539-8542
AB Chiral crown ether (S,S)-3 having a pseudo-24-crown-8 ring and chiral podand (R,R)-4 were prepd. and both exhibited good chiral recognition ability toward secondary amines, N-.alpha.-dimethylbenzylamine (15) and propranolol (16).

L7 ANSWER 41 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 136:14888 CA
TI Stationary phase for chromatography
IN Nishioka, Ryota; Ueshige, Tetsuro; Tobe, Yoshihito; Hirose, Keiji
PA Sumika Chemical Analysis Service Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
PI JP 2001327863 A 20011127 JP 2000-153051 20000524
PRAI JP 2000-153051 20000524
AB The title stationary phase is made by bonding a crown ether of specific structure to silica gel carrier. The phase has a structure as shown in graph (I), where R1, R2, and R3 are monovalent groups with at least one of them bonded to Si atom. R4 is H atom or an alkyl group of 1-10 C. R5-12 are H atom or substituted alkyl groups of 1-30 C or cyclic alkyl, aryl groups. The better results are given while R6-R7 or R10-R11 are bonded each other to form alkylene groups of 2-60 C. N is an integer of 1-10 and X is -NHCO- or NH- group. The stationary phase has good durability and sepn. property.

L7 ANSWER 45 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 135:231767 CA
TI Preparation and evaluation of novel chiral stationary phases chemically bonded with chiral pseudo crown ether
AU Nishioak, R.; Ueshige, T.; Nakamura, T.; Hirose, K.; Tobe, Y.
CS Sumika Chemical Analysis Service, Japan
SO Chromatography (2000), 21(4), 294-295
LA Japanese
AB We have developed novel chiral stationary phases (CSPs) covalently bonded with chiral pseudo crown ether contg. Ph groups as chiral barrier which has high ability of discriminating enantiomers. These CSPs are chem. stable, so that both the reversed and the normal phases can be used. These are very effective for enantiomer sepns. of wide range of chiral amines, aminoalcs. and amino acids, esp. for hydrophobic amines.

L7 ANSWER 46 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 135:191397 CA
TI Enantiomeric separations of stimulant materials using chiral stationary phase bonded with pseudo crown ether
AU Ueshige, T.; Nishioka, R.; Nakamura, T.; Hirose, K.; Tobe, Y.
CS Sumika Chemical Analysis Service, Japan
SO Chromatography (2000), 21(4), 368-369
LA Japanese
AB We have developed novel chiral stationary phases (CSPs) chem. bonded with chiral pseudo 18-crown-6 ether. These CSPs are effective for enantiomer sepns. of chiral amines, amino acids, and esp. of amino alcs. In this report, the method for direct chiral sepns. of DL-norephedrine, one of stimulant materials, and its related compds. with HPLC using these CSPs were developed. This method is suitable for practical use.

L7 ANSWER 47 OF 76 CA COPYRIGHT 2008 ACS on STN

AN 133:349944 CA
TI Enantioselective complexation of phenolic crown ethers with chiral aminoethanol derivatives: effects of substituents of aromatic rings ofhosts and guests on complexation
AU Hirose, Keiji; Ogasahara, Kazuko; Nishioka, Kazuyuki; Tobe, Yoshito; Naemura, Koichiro
CS Faculty of Engineering Science, Department of Chemistry, Osaka University, Toyonaka, Osaka, 560-8531, Japan
SO Perkin 2 (2000), (9), 1984-1993
AB Optically active azophenolic crown ethers having Ph groups substituted at the resp. para-position were prepd. and their assocn. consts. with chiral aminoethanol derivs., including 2-amino-2-phenylethanols having an electron-donating or an electron-withdrawing group, were detd. in chloroform by means of UV-vis titrn. methods. The enantioselectivities of these crown ethers are estd. from the ratio of the assocn. consts. KR/KS and the effect of arom. substituents of both hosts and guests on the binding abilities and enantioselectivities is discussed. The structures of the complexes were investigated on the basis of the 1H NMR and UV-vis spectra.

L7 ANSWER 56 OF 76 CA COPYRIGHT 2008 ACS on STN
AN 129:95231 CA
OREF 129:19643a,19646a
TI Preparation and temperature-dependent enantioselectivities of homochiral phenolic crown ethers having aryl chiral barriers: thermodynamic parameters for enantioselective complexation with chiral amines
AU Naemura, Koichiro; Nishioka, Kazuyuki; Ogasahara, Kazuko; Nishikawa, Yasushi; Hirose, Keiji; Tobe, Yoshito
CS Dep. Chem., Fac. Eng. Sci., Osaka Univ., Osaka, 560, Japan
SO Tetrahedron: Asymmetry (1998), 9(4), 563-574
AB (In this abstr. 1-4 = I-IV, resp.). Homochiral crown ether (S,S)-1 contg. 1-naphthyl groups as chiral barriers together with the phenol moiety was prepd. by using (S)-3 as a chiral subunit which was resolved in enantiomerically pure form by lipase-catalyzed enantioselective acylation of (.+-.)-3. Homochiral phenolic crown ether (S,S)-2, contg. Ph groups as chiral barriers, was also prepd. from (S)-4 which was derived from (S)-mandelic acid. The assocn. consts. for their complexes with chiral amines in CHCl3 were detd. at various temps. by the UV-visible spectroscopic method demonstrating that the crown ethers (S,S)-1 and (S,S)-2 displayed the large ΔR-SΔG values of 6.2 and 6.4 kJ mol-1, resp., towards the amine (R)-2-amino-2-phenylethanol at 15.degree.C. Thermodn. parameters for complex formation were also detd. and a linear correlation between TΔR-SΔS and ΔR-SΔH values was obsd.

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AN 126:171153 CA
OREF 126:33069a,33072a
TI Temperature dependent reversal of enantiomer selectivity in the complexation of optically active phenolic crown ethers with chiral amines
AU Naemura, Koichiro; Fuji, Junichi; Ogasahara, Kazuko; Hirose, Keiji; Tobe, Yoshito
CS Dep. Chem., Fac. Eng. Sci., Osaka Univ., Osaka, 560, Japan
SO Chemical Communications (Cambridge) (1996), (24), 2749-2750
AB Phenolic crown ethers (S,S)-I (R= 1-adamantyl, Ph, Me) and (R,R)-II were prepd. in enantiomerically pure forms; the enantiomer selectivities of crown ethers (S,S)-I(R= 1-adamantyl) and (R,R)-II in complexation with 2-aminopropan-1-ol reversed at ca. 6.degree. and increased with increasing temp. above the isoenantioselective temp.

=> log y
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